

AMENDMENTS TO THE CLAMS

1. (Currently Amended) A method of making an optical fiber preform comprising the steps of:

preparing a starting member by fusing a dummy rod to each of both end portions of a core preform comprising a core and a cladding; and

spraying and depositing fine particles of glass synthesized by a glass synthesizing burner onto the outer periphery of said starting member so as to form a soot body while axially reciprocating said starting member relative to the glass synthesizing burner while rotating said starting member about its axis;

wherein each $[[a]]$ marking point is set at a position separated from a corresponding junction between said core preform and each dummy rod by $A \times (\text{a target outside diameter of the soot body [mm]})^2 [\text{mm}]$ (where $0.0015 < A < 0.0030$) toward ~~the~~ each dummy rod, said reciprocating is effected by reversing a direction of a relative movement of said starting member and said glass synthesizing burner at each time when said glass synthesizing burner reaches said marking point or beyond toward an end of said starting member, and a glass raw material is supplied to said glass synthesizing burner when the burner is located between said marking points.

2. (Currently Amended) A method of making an optical fiber preform according to claim 6, wherein said reciprocating is effected by reversing the direction of said relative movement at each time just after ~~all of~~ said glass synthesizing ~~burners~~ burner reaches either dummy ~~rods~~ rod beyond said marking point.

3. (Previously Presented) A method of making an optical fiber preform according to claim 1, wherein a fuel gas is supplied to said glass synthesizing burner when said burner is

positioned on either dummy rods beyond said marking points so as to heat end portions of the soot body formed.

4. (Previously Presented) A method of making an optical fiber preform according to claim 1, wherein each end portion of the formed soot body is heated by auxiliary burners disposed on a starting member end portion side of said marking point.

5. (Previously Presented) An apparatus for making an optical fiber preform, in which a starting member prepared by fusing a dummy rod to each of both end portions of a core preform comprising a core and a cladding is axially reciprocated relative to glass synthesizing burner while the starting member is being rotated about its axis; and fine particles of glass synthesized by the glass synthesizing burner are sprayed and deposited onto the outer periphery of the starting member so as to form a soot body;

said apparatus comprising;

a holder member for holding at least one end of said starting member;

glass synthesizing burner for spraying soot particles toward said starting member;

a material supply device for supplying a glass raw material to said glass synthesizing burner;

a moving device for axially reciprocating said starting member relative to said glass synthesizing burner while axially rotating said starting member;

an input device for inputting a target outside diameter value d [mm] of the soot body to be formed or a characteristic value necessary for a calculation thereof; and

a control device for setting a marking point at a position separated from a junction between said core preform and each dummy rod by $A \times d^2$ [mm] (where $0.0015 \leq A < 0.0030$) toward the dummy rod based on the inputted target outside diameter value of the soot body or based on the target outside diameter value of the soot body determined from the inputted characteristic value,

controlling said moving device so as to reverse a direction of a relative movement of said moving device and effect said axial reciprocating at each time when said glass synthesizing burner reaches said marking point or beyond toward an end of said starting member, and controlling said material supply device so as to constantly supply the glass raw material to said glass synthesizing burner when said glass synthesizing burner is located between the marking points.

6. (Previously Presented) A method of making an optical fiber preform comprising the steps of:

preparing a starting member by fusing a dummy rod to each of both end portions of a core preform comprising a core and cladding; and

spraying and depositing fine particles of glass synthesized by glass synthesizing burners onto the outer periphery of said starting member so as to form a soot body while axially reciprocating said starting member relative to the glass synthesizing burners while rotating said starting member about its axis;

wherein each marking point is set at a position separated from a corresponding junction between said core preform and each dummy rod by $A \times (a \text{ target outside diameter of the soot body [mm]})^2 \text{ [mm]}$ (where $0.0015 < A < 0.0030$) toward the dummy rod, said reciprocating is effected by reversing a direction of a relative movement of said starting member and said plurality of glass synthesizing burners at each time when all of said glass synthesizing burners reach said marking point or beyond toward an end of said starting member, and a glass raw material is supplied to said glass synthesizing burners when the burner is located between said marking points.

7. (Previously Presented) A method of making an optical fiber preform according to claim 6, wherein a fuel gas is supplied to each of said glass synthesizing burners when the burner is

positioned on either dummy rods beyond said marking points so as to heat end portions of the soot body formed.

8. (Previously Presented) A method of making an optical fiber preform according to claim 6, wherein each end portion of the formed soot body is heated by auxiliary burners disposed on a starting member end portion side of said marking point.

9. (Currently Amended) An apparatus for making an optical fiber preform, in which a starting member prepared by fusing a dummy rod to each of both end portions of a core preform comprising a core and a cladding is axially reciprocated relative to a plurality of disposed glass synthesizing burners while the starting member is being rotated about its axis; and fine particles of glass synthesized by the glass synthesizing burners are sprayed and deposited onto the outer periphery of the starting member so as to form a soot body;

said apparatus comprising:

a holder member for holding at least one end of said starting member;

a plurality of glass synthesizing burners for spraying soot particles toward said starting member;

a material supply device for supplying a glass raw material to each of said glass synthesizing burners;

a moving device for axially reciprocating said starting member relative to said glass synthesizing burners while axially rotating said starting member;

an input device for inputting a target outside diameter value d [mm] of the soot body to be formed or a characteristic value necessary for a calculation thereof; and

a control device for setting a marking point at a position separated from a junction between said core preform and each dummy rod by $A \times d^2$ [mm] (where $0.0015 < A < 0.0030$) toward the

dummy rod based on the inputted target outside diameter value of the soot body or based on the target outside diameter value of the soot body determined from the inputted characteristic value, controlling said moving device so as to reverse a direction of a relative movement of said moving device and effect said axial reciprocating at each time when all of said glass synthesizing burners reach said marking point or beyond toward an end of said starting member, and controlling said material supply device so as to constantly supply the glass raw material to each of said glass synthesizing burners when said glass synthesizing burners are located between the marking points.